

1. A conveyance apparatus for use with carriages, comprising a rail device and a carriage supported and guided by this rail device and allowed to move along a fixed route, characterized in that the carriage is provided with a rotary control means extending to the left and right from the carriage body, and a transport object support means capable of rotating about an anteroposterior axis is provided to a free end section of the rotary control means, the support means being adapted to support a transport object in a position extending to the left and right from the carriage body.

2. A conveyance apparatus for use with carriages as claimed in Claim 1, characterized in that the rotary control means is adapted to rotate about a vertical axis, and the transport object support means is adapted to rotate about an anteroposterior axis, the support means being adapted to support a transport object in a position extending to the left and right from the carriage body.

3. A conveyance apparatus for use with carriages as claimed in Claim 2, characterized in that the support means is adapted to support a transport object in a position extending to the left and right from the carriage body, and the support means is adapted to rotate about an anteroposterior axis, the support means being adapted to support a transport object in a position extending to the left and right from the carriage body.

4. A conveyance apparatus for use with carriages as claimed in Claim 1, characterized in that the rotary control means is adapted to rotate about a vertical axis, and the transport object support means is adapted to rotate about an anteroposterior axis, the support means being adapted to support a transport object in a position extending to the left and right from the carriage body.

5. A conveyance apparatus for use with carriages as claimed in Claim 4, characterized in that the support means is adapted to support a transport object in a position extending to the left and right from the carriage body, and the support means is adapted to rotate about an anteroposterior axis, the support means being adapted to support a transport object in a position extending to the left and right from the carriage body.



9. ~~FIG. 10.~~ A conveyance apparatus for use with carriages as claimed in any of Claims 1-8, characterized in that the transport object support means is rotated into a pendant position, and a liquid treatment is performed on the transport object supported on the free end section of the transport object support means in the treatment section.

10. ~~FIG. 11.~~ A conveyance apparatus for use with carriages as claimed in any of Claims 1-8, characterized in that at a prescribed location along the fixed route, a turning means is provided for turning, about a longitudinal axis, a transport object support means that has been rotated about an anteroposterior axis in a horizontal position.

11. ~~FIG. 12.~~ A conveyance apparatus for use with carriages as claimed in any of Claims 1-8, characterized in that ~~at a prescribed location along the fixed route,~~

~~the transport object support means is rotated about a longitudinal axis, and a liquid treatment is performed on the transport object supported on the free end section of the transport object support means in the treatment section.~~

12. ~~FIG. 13.~~ A conveyance apparatus for use with carriages as claimed in any of Claims 1-8, characterized in that ~~at a prescribed location along the fixed route,~~

~~the transport object support means is rotated about a longitudinal axis, and a liquid treatment is performed on the transport object supported on the free end section of the transport object support means in the treatment section.~~



## CLAIMS

1. A conveyance apparatus for use with carriages, comprising a rail device and a carriage supported and guided by this rail device and allowed to move along a fixed route, characterized in that the carriage is provided with a rotary control means extending to the left and right from the carriage body, a transport object support means capable of rotating about an anteroposterior axis is provided to a free end section of the rotary control means, and the rotary control means is supported and guided by a guide rail laid along the rail device and between the rail device and the anteroposterior axis.

2. A conveyance apparatus for use with carriages as claimed in Claim 1, characterized in that a rotary drive means capable of connecting with and disconnecting from the rotary control means is provided at a prescribed location along the fixed route.

3. A conveyance apparatus for use with carriages as claimed in Claim 2, characterized in that the rotary control means has a transversely extending control shaft, and the rotary drive means can be put in or out of engagement with the control shaft by being moved transversely.

4. A conveyance apparatus for use with carriages as claimed in Claim 2, characterized in that the rotary control means has a transversely extending control shaft, and the rotary drive means can be put in or out of engagement with the control shaft by being moved to

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approach to or distance from the external periphery.

5. A conveyance apparatus for use with carriages as claimed in any of Claims 1 to 4, characterized in that the transport object support means comprises a base on the side of the rotary control means and a distal portion for supporting the transport object, the distal portion being able to pivot about a longitudinal axis in relation to the base.

6. A conveyance apparatus for use with carriages as claimed in any of Claims 1 to 4, characterized in that the fixed route passes through a treatment section, and the rotary control means is rotated in accordance with the type of treatment performed in this treatment section.

7. A conveyance apparatus for use with carriages as claimed in Claim 5, characterized in that the fixed route passes through a treatment section, and the rotary control means is rotated in accordance with the type of treatment performed in this treatment section.

8. A conveyance apparatus for use with carriages as claimed in any of Claims 1 to 4, characterized in that the transport object support means is rotated into a pendant position, and a liquid treatment is performed on the transport object supported on the free end section of the transport object support means in the treatment section.

9. A conveyance apparatus for use with carriages as claimed in Claim 5, characterized in that the transport object support means is rotated into a pendant position, and a liquid treatment is performed

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on the transport object supported on the free end section of the transport object support means in the treatment section.

10. A conveyance apparatus for use with carriages as claimed in Claim 5, characterized in that at a prescribed location along the fixed route, a turning means is provided for turning, about a longitudinal axis, a transport object support means that has been rotated about an anteroposterior axis in a horizontal position.

11. A conveyance apparatus for use with carriages as claimed in Claim 7, characterized in that at a prescribed location along the fixed route, a turning means is provided for turning, about a longitudinal axis, a transport object support means that has been rotated about an anteroposterior axis in a horizontal position.

12. A conveyance apparatus for use with carriages as claimed in Claim 8, characterized in that at a prescribed location along the fixed route, a turning means is provided for turning, about a longitudinal axis, a transport object support means that has been rotated about an anteroposterior axis in a horizontal position.

13. A conveyance apparatus for use with carriages as claimed in any of Claims 1 to 4, characterized in that the fixed route passes through an electrodeposition chamber and a drying furnace; that in the electrodeposition chamber, the transport object support means is rotated into a pendant position where

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the transport object supported on the free end section of the transport object support means is introduced into a paint solution tank, and the transport object support means is then rotated into a horizontal position where the transport object is drained of excess solution; and that, in the drying furnace, the transport object support means is rotated into a vertical position where the transport object is dried.

14. A conveyance apparatus for use with carriages as claimed in any of Claims 1 to 4, characterized in that the fixed route passes through a plurality of treatment sections; that the first-stage treatment section is an electrodeposition chamber; that the transport object support means is rotated into a pendant position where the transport object supported on the free end section of the transport object support means is introduced into a paint solution tank, and the transport object support means is then rotated and tilted slightly upward relative to the horizontal position where the transport object is drained of excess solution; and that the object is conveyed in the tilted state to a second-stage treatment section.